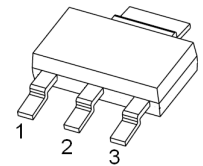


Features

- Epitaxial planar die construction
- Complementary NPN Type available (PZT2222A)



SOT-223

1. BASE
2. COLLECTOR
3. EMITTER

Absolute Maximum Ratings (T_A = 25 °C unless otherwise noted)

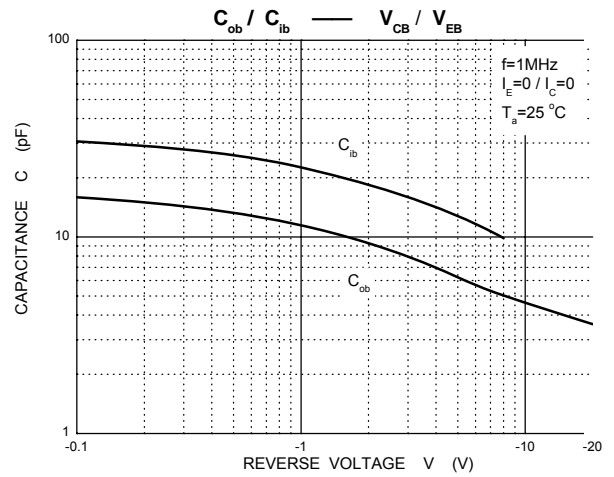
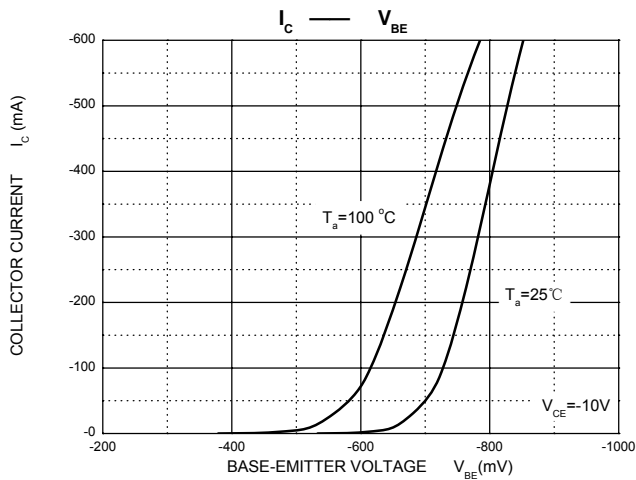
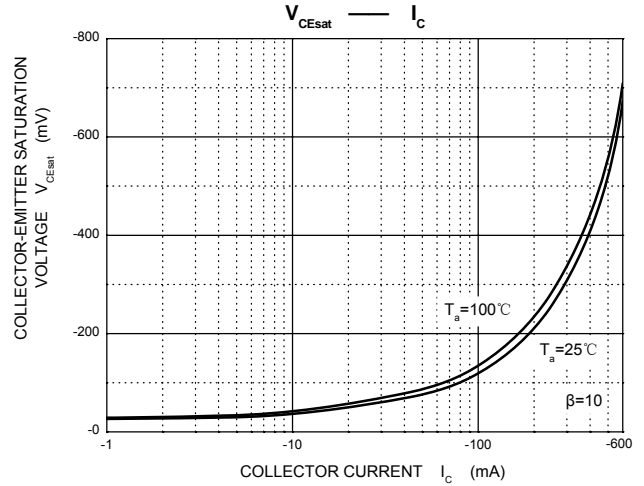
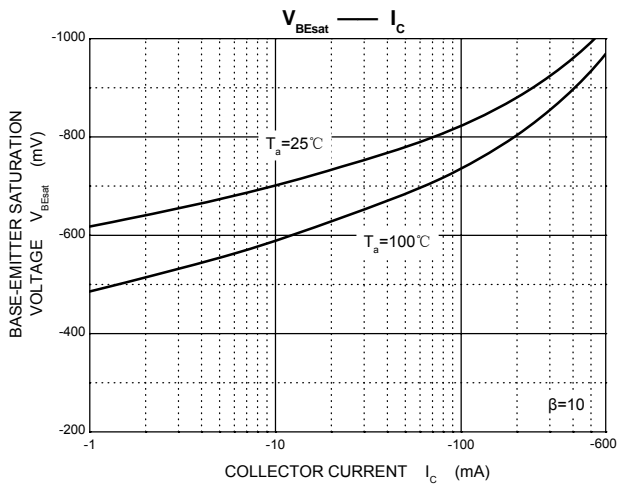
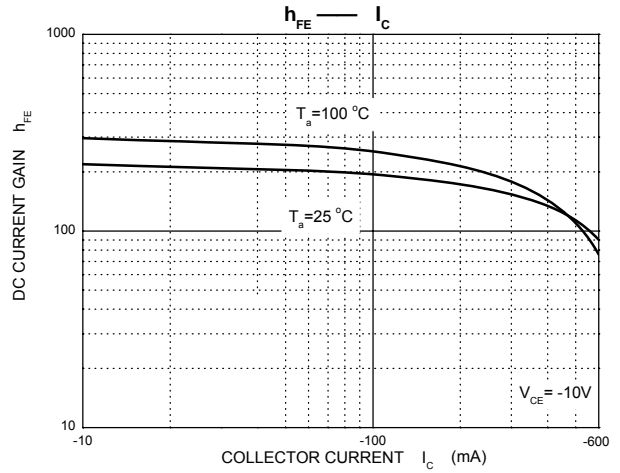
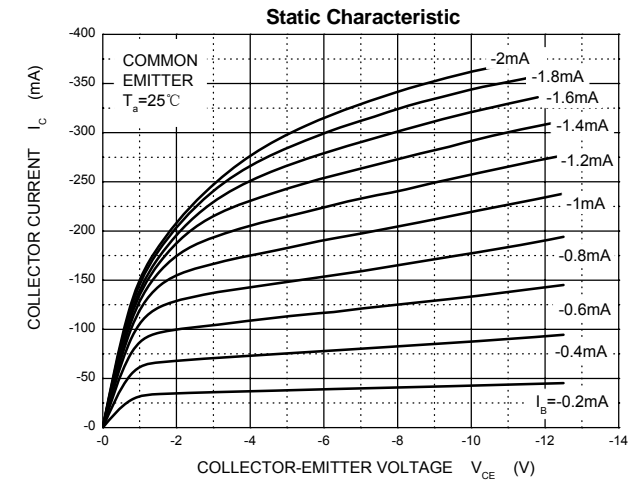
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	-60	V
Collector-Emitter Voltage	V _{CEO}	-60	V
Emitter-Base Voltage	V _{EBO}	-5	V
Collector Current - Continuous	I _C	-0.6	A
Collector Power Dissipation	P _C	1	W
Thermal Resistance Junction-to-Ambient ¹	R _{θJA}	83.3	°C/W
Junction and Storage Temperature	T _J , T _{STG}	-55 to +150	°C

Note 1: FR-4 with 1 oz and 713 mm² of copper area.

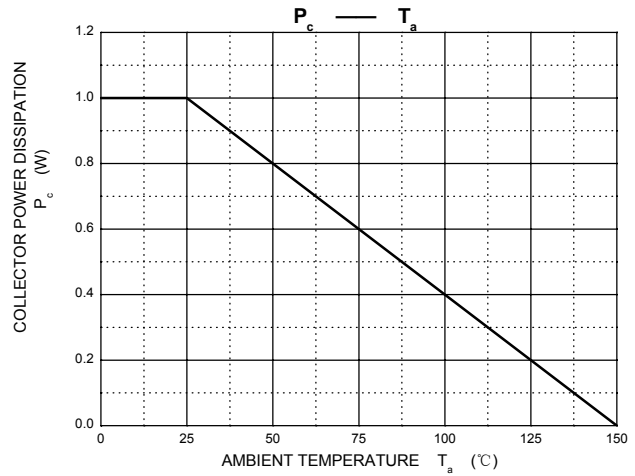
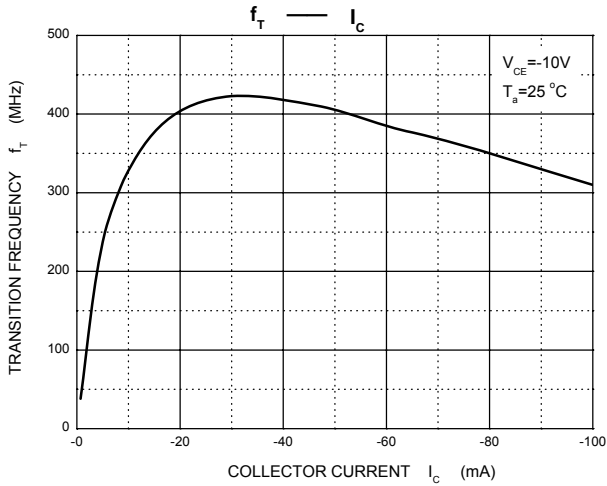
Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Max	Unit
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C = -10μA, I _E = 0	-60	-	V
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C = -10mA, I _B = 0	-60	-	V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E = -10μA, I _C = 0	-5	-	V
Collector Cut-Off Current	I _{CBO}	V _{CB} = -50V, I _E = 0	-	-10	nA
Emitter Cut-Off Current	I _{EBO}	V _{EB} = -5V, I _C = 0	-	-50	nA
DC Current Gain	h _{FE(1)}	V _{CE} = -10V, I _C = -0.1mA	75	-	-
	h _{FE(2)}	V _{CE} = -10V, I _C = -1mA	100	-	-
	h _{FE(3)}	V _{CE} = -10V, I _C = -10mA	100	-	-
	h _{FE(4)}	V _{CE} = -10V, I _C = -150mA	100	300	-
	h _{FE(5)}	V _{CE} = -10V, I _C = -500mA	50	-	-
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C = -150mA, I _B = -15mA	-	-0.4	V
	V _{CE(sat)}	I _C = -500mA, I _B = -50mA	-	-1.6	V
Base-Emitter Saturation Voltage	V _{BE(sat)}	I _C = -150mA, I _B = -15mA	-	-1.3	V
	V _{BE(sat)}	I _C = -500mA, I _B = -50mA	-	-2.6	V
Transition Frequency	f _T	V _{CE} = -20V, I _C = -50mA, f = 100MHz	200	-	MHz
Collector Capacitance	C _c	V _{CB} = -10V, I _E = 0, f = 1MHz	-	8	pF
Emitter Capacitance	C _e	V _{EB} = -2V, I _C = 0, f = 1MHz	-	30	pF
Delay Time	t _d	I _C = -150mA I _{B1} = - I _{B2} = - 15mA	-	12	ns
Rise Time	t _r		-	30	ns
Storage Time	t _s		-	300	ns
Fall Time	t _f		-	65	ns
Turn-on Time	t _{on}		-	42	ns
Turn-off Time	t _{off}		-	365	ns

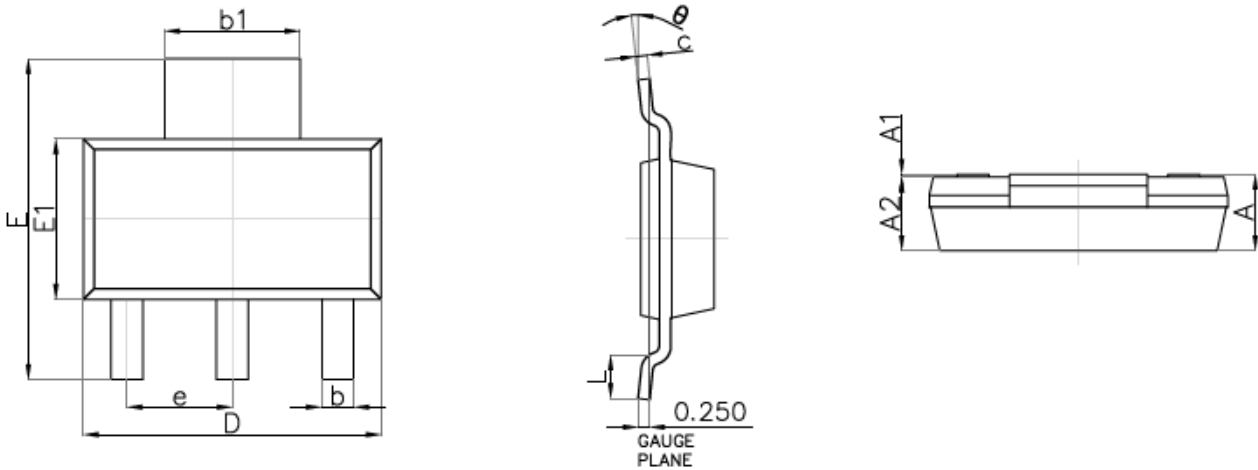
Typical Characteristic Curves



Typical Characteristic Curves

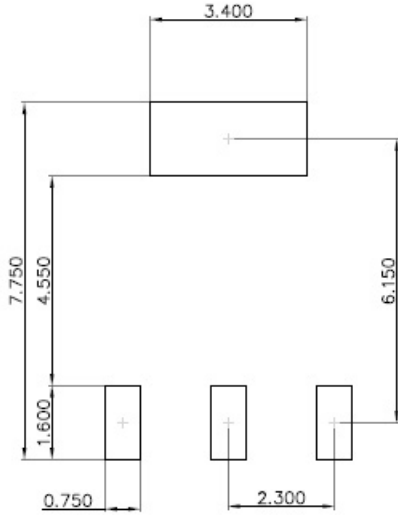


Package Outline Dimensions SOT-223



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	—	1.800	—	0.071
A1	0.020	0.100	0.001	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.840	0.026	0.033
b_1	2.900	3.100	0.114	0.122
c	0.230	0.350	0.009	0.014
D	6.300	6.700	0.248	0.264
E	6.700	7.300	0.264	0.287
E_1	3.300	3.700	0.130	0.146
e	2.300(BSC)		0.091(BSC)	
L	0.750	—	0.030	—
θ	0°	10°	0°	10°

Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.050 mm.
3. The pad layout is for reference purposes only.

Marking and Ordering Information

Device	Package	Marking	Quantity	HSF Status
PZT2907A	SOT-223	ZT2907A	2500pcs / Reel	RoHS Compliant